VINEYARD WIND

February 26, 2019

Energy and Technology Committee
Legislative Office Building, Room 3900
Hartford, CT 06016

Vineyard Wind SUPPORTS

H.B. 7156: An Act Concerning the Procurement of Energy Derived from Offshore Wind
S.B. 875: An Act Expanding Connecticut's Offshore Wind Energy Portfolio.

Dear Chairman Arconti, Chairman Needleman, Ranking Member Formica, Ranking Member Ferraro, and distinguished members of the Energy and Technology Committee,

My name is Erich Stephens and I am the Chief Development Officer of Vineyard Wind LLC ("Vineyard Wind"). It is my pleasure to testify in **SUPPORT** of both H.B.7156: An Act Concerning the Procurement of Energy Derived from Offshore Wind and S.B. 875: An Act Expanding Connecticut's Offshore Wind Energy Portfolio. My testimony focuses on the benefits of offshore wind and the role ports can play in maximizing offshore wind's economic development potential.

Vineyard Wind is a New England-based company and the leading US offshore wind developer. We are currently developing and financing the nation's first commercial-scale offshore wind farm- an 800 MW project in federal waters south of Martha's Vineyard. The project is set to begin construction later this year. Vineyard Wind is backed by two of the world's most successful and experienced offshore wind project developers and investors- Copenhagen Infrastructure Partners (CIP) and Avangrid Renewables. CIP manages over $7 billion in clean energy investments worldwide, and its senior partners are some of the world's pioneers in the offshore wind industry. Avangrid Renewables is one of the leading providers of wind energy in the US, and is an affiliate of the Iberdrola Group, the world's largest wind project developer and operator with more than 15 GW of wind power capacity installed.

The emerging US offshore wind industry offers enormous new economic development opportunities, and a vast source of low-cost, zero-emission energy. The recent renewable energy procurements conducted by Connecticut and its neighbors are an important first step in establishing an offshore wind industry in the region. Connecticut can now build on these early efforts by enacting smart procurement policies to support future offshore wind projects and in-state supply chain development, thereby providing substantial economic, environmental, and reliability benefits to the state in the next decade and beyond.

Offshore wind's many benefits are readily demonstrated by Vineyard Wind's first 800 MW project:

- **Jobs:** More than 3,600 local full-time equivalent jobs will be created over the life of the project.
- **Energy Savings:** $3.7 billion in energy-related cost savings will be realized.

- **Abundant Power:** The project will produce enough electricity to power more than 400,000 households.
- **Emission Reductions:** 1.68 million metric tons of carbon dioxide emissions will be avoided every year, equivalent to taking 325,000 cars off the road.

Offshore wind procurements allow states to secure large amount of renewable energy at competitive prices, spur in-state economic development and job creation, stabilize energy costs, reduce emissions, and improve grid reliability and security. Achieving these outcomes requires a clear, transparent policy framework that fosters competition between offshore wind developers and drives down costs.

Connecticut Ports Increase Offshore Wind's Economic Development Potential

Connecticut's ports can amplify the economic development potential of offshore wind and are a competitive advantage in the race among states to secure a significant portion of the offshore wind industry now developing on the East Coast. Thousands of megawatts of offshore wind are set to come online in the next decade and much of this new capacity is within sailing distance of Connecticut's ports.

Connecticut ports and harbors are unique in being free from both width and overhead limitations. Few if any ports in the Northeast have such favorable conditions for offshore wind vessels as Connecticut's deep-water ports. What's more, Connecticut's robust marine, maritime, and steel fabrication industries, along with the skilled workforce that sustains them, are a perfect match for offshore wind.

The expected investments in and upgrades to the New London port are an important first step for Connecticut to become a focal point of the offshore wind industry. However, even with improvements and upgrades, New London will have limited capacity relative to anticipated demand. One port is also not enough to ensure a competitive position for Connecticut. Multiple offshore wind ports in Connecticut will mean more offshore wind business for the state.

Bridgeport's Offshore Wind Future

Vineyard Wind has teamed with two experienced local maritime companies, McAllister Towing and Transportation Co. ("McAllister") and Bridgeport Boatworks Inc. ("Bridgeport Boatworks"), to develop a new offshore wind port in Bridgeport, Connecticut. Bridgeport, with its wide harbor entrance and with no overhead obstructions, is an ideal location for a second port.

This initiative will direct private investment to upgrade a currently underutilized portion of Bridgeport's harbor into a port facility for offshore wind. This investment will create jobs in and around Bridgeport, in both the near- and long-term, help revitalize the city, and position Connecticut ahead of other states in the region in terms of its ability to attract and support the development of multiple offshore wind projects simultaneously.

The key features of our Bridgeport wind development plan includes the following:

1. Installation of a heavy lift crane to lift large wind turbine components from ocean going vessels, and then back on to the installation vessels during construction of an offshore wind project.
2. Creation of a large component work and storage area, which could also allow fabrication work to be carried out in Bridgeport.
3. Upgrades to the dockside and piers to allow access to the port for modern, ocean going vessels.

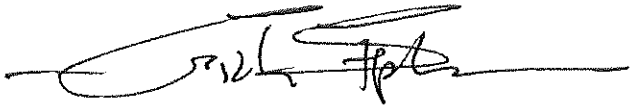
These port facility upgrades will enable Vineyard Wind to fabricate foundations, and serve as a wind turbine staging, storage, and assembly site.

Vineyard Wind is committed to moving forward with this initiative in conjunction with the development of a dedicated offshore wind project for Connecticut. But we need a first Connecticut project opportunity to underpin this substantial investment in Bridgeport. The port upgrades themselves will create onshore construction jobs, and then our first project will create hundreds of offshore wind jobs. And once this investment is made, it will enable job creation for years to come as the Bridgeport facility supports offshore wind projects being built up and down the East Coast.

In closing, I want to thank the committee leadership and Governor Lamont for your efforts to support offshore wind development in Connecticut. Attached to my testimony is some suggested language to incorporate in any wind procurement legislation that will allow Connecticut to cost-effectively procure additional offshore wind capacity, build a local offshore wind industry and supply chain, and maximize in-state benefits.

Vineyard Wind looks forward to working with all parties to craft legislative language that best supports the offshore wind industry's efforts to continue bringing the many benefits of offshore wind to Connecticut.

Respectfully submitted,



Erich Stephens
Chief Development Officer
Vineyard Wind

Recommendations for Offshore Wind Procurement Legislation

Objectives of offshore wind procurement legislation:

- Large amounts of clean energy at the most competitive price, in order to achieve carbon emissions reductions
- Economic development and job creation
- Energy cost stabilization, and improved reliability and security

Successful offshore wind procurement legislation should contain the following components[1]:

- ***Near-term requirements and long-term goals.*** The legislation should establish both near-term requirements for utilities to procure offshore wind, as well as long-term goals. This approach will give developers needed certainty to invest millions of dollars in designing the best projects to be built in the near-term, should they have a winning bid. And the long-term goals will incentive greater investment in infrastructure and workforce than would happen otherwise, since investors will have confidence in building towards a long-term, large offshore wind industry. The near-term requirement should be for a specific MW capacity by the end of a certain year, for example 2500MW by 2025. The longer term objective could be expressed as a percentage of state load by a later year, for example 50% offshore wind by 2030. Establishing both short-term requirements and long-term targets will jump-start the industry and provide long-term market visibility for developers, manufacturers, suppliers and service providers to invest in Connecticut.

- ***Offshore wind-only procurement.*** It takes longer to plan and develop offshore wind projects than other types of renewables. Therefore, an offshore wind-only procurement mechanism is best since, coupled with offshore wind procurement requirements and targets (per above), developers can get insight into total market opportunities in the long-term. This in turn allows for long-range planning that can drive down prices, heighten competition, and avoid "boom/bust" scenarios that undermine economic development and make in-state investment difficult.

- ***Specify long-term contracts.*** Connecticut should continue utilizing the long-term bundled power purchase agreements (PPA) for energy and renewable energy credits (RECs). This structure has proven highly effective in capturing benefits -including very competitive prices- for consumers and enabling new project development. This approach is also readily compatible with Connecticut's energy market and regulatory structures. This structure has been successfully utilized in Connecticut, Massachusetts, and Rhode Island to procure utility-scale renewable energy, including offshore wind. The legislation should require that solicitations provide a model PPA, as discussed below.

- ***20-25* year contract term**. The legislation should specify a minimum and maximum contract tenor allowed under the procurements of 20 to 25 years. This is compatible with the expected operational life of an offshore wind project, and by maximizing the term of the contract, lower prices can be offered to ratepayers.

- ***First solicitation and regular schedule.*** The legislation should initiate the offshore wind procurement program by including a requirement that the first solicitation be issued no later than a specified date of no more than a year from the date of passage of the legislation. The legislation should also specify the frequency of subsequent solicitations, so that developers have a schedule by which they can effectively plan the most competitive projects possible.

- ***Project size.*** The legislation should require each solicitation to require a base bid of between 400MW and 800MW. This range is narrow enough to allow meaningful comparisons between bids but also provides developers flexibility to optimize design of the project. In addition to a required base bid, the legislation should also allow bidders to propose projects up to 1200MW in size, enabling developers to achieve a significant economies of scale, potentially lowest prices, and attract the most investment into Connecticut's offshore wind supply chain and infrastructure.

- ***DEEP proceedings to determine solicitation design.*** The legislation should require DEEP to undertake proceedings in order to solicit feedback on and establish important details including:

    - Qualification requirements, such as project eligibility and viability, including bidder experience, financial capability, site control, permitting status and plan, interconnection and transmission upgrades, and informational requirements, including project design and schedule as well as site and resource assessment.

    - Evaluation criteria and approach, including how DEEP should evaluate price and non-price elements of each proposal, and what scoring system DEEP will employ.

    - Development of a model PPA most appropriate for Connecticut offshore wind.

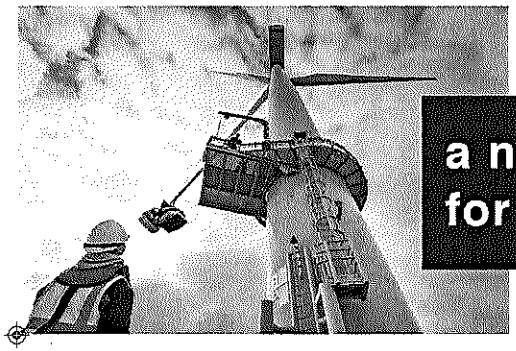
[1] Recommendations are based largely on experience in Europe, and also from other state's clean energy procurement programs.

VINEYARD WIND
CONNECTICUT

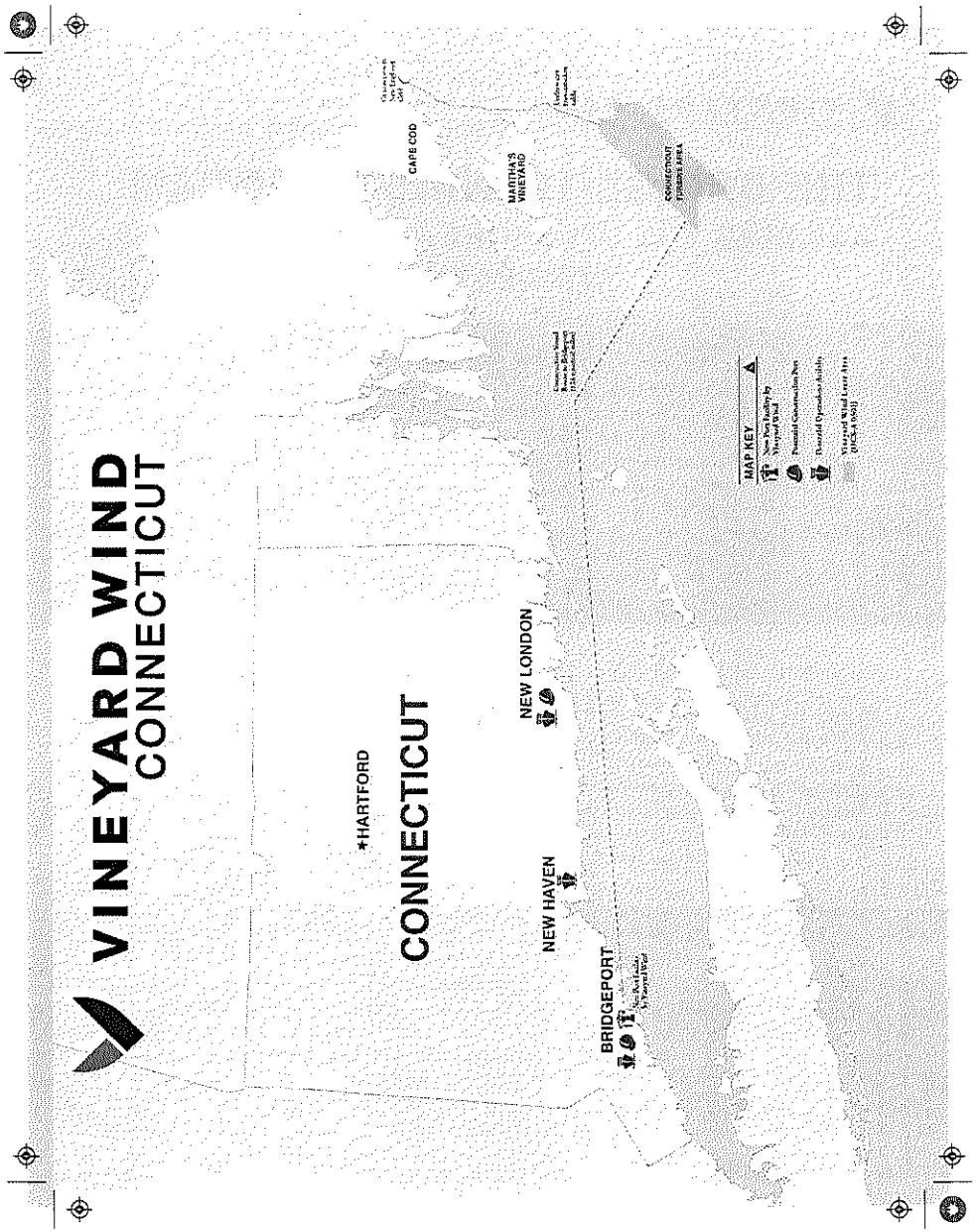
Vineyard Wind's Connecticut project will establish Connecticut as a leader and center of the new offshore wind industry that is developing on the East Coast, creating jobs and business opportunities for years to come.

The Vineyard Wind project will make a significant contribution to addressing Connecticut's energy challenges by providing zero emission energy at times when energy is needed the most, and the demand for natural gas is the highest.

- Competitivly priced electricity, with no cost risk for Connecticut rate-payers, and no dependency on imported fuels
- Creating over 500 jobs in Connecticut during construction and over 1,900 jobs over the lifecycle of the project
- Providing total economic benefits of over $4 billion to Connecticut, as determined by an independent economic analysis
- Avoiding over 1,300,000 tons of carbon dioxide annually, the same as taking 280,000 cars off the road
- Enhancing electricity reliability, reducing winter price spikes, and stabilizing electricity prices



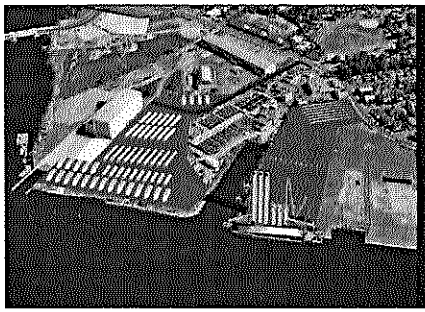
a new industry for Connecticut



VINEYARD WIND

THE BRIDGE-TO-WIND PROGRAM:

BUILDING THE OFFSHORE WIND INDUSTRY IN CONNECTICUT

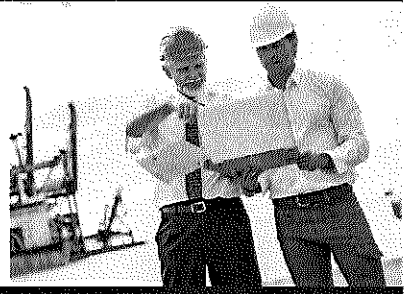


A NEW PORT IN BRIDGEPORT

Vineyard Wind is teaming with Bridgeport Boatworks and McAllister Towing to develop a new offshore wind port in Bridgeport. This new port would support construction of Vineyard Wind's Connecticut project, as well as future projects being built around the region. With offshore wind ports in both New London and Bridgeport, Connecticut will be established as a center of the US offshore wind industry for years to come.

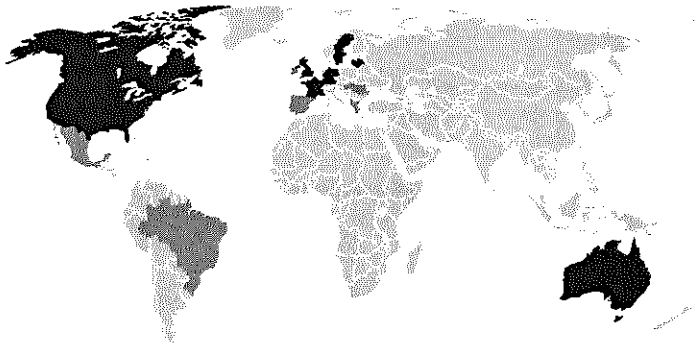
BUSINESS DEVELOPMENT GRANTS

Offshore wind business development grants can attract existing offshore wind businesses to relocate to Connecticut, and assist existing Connecticut companies enter the growing offshore wind industry. If selected to build a project to serve Connecticut, Vineyard Wind will fund grants to build the offshore wind supply chain in Connecticut.



JOBS TRAINING AND WORKFORCE DEVELOPMENT

Working on the construction and operations of offshore wind projects requires specialized skills and certifications. Vineyard Wind would provide grants to community colleges, vocational schools, and non-profit agencies to get Connecticut residents the training they need for careers in offshore wind.



Vineyard Wind's investors and technical team have global wind project experience, both offshore wind (navy) and onshore wind (teal)

GLOBAL OFFSHORE WIND AND RENEWABLE ENERGY EXPERIENCE

Vineyard Wind is an offshore wind development currently developing the first large-scale offshore wind energy project in the United States, to be located 14 miles south of Martha's Vineyard.

Vineyard Wind, a New England based company, is 50 percent owned by funds of Copenhagen Infrastructure Partners (CIP), and 50 percent by Avangrid Renewables.

Avangrid Renewables is one of the leading providers of clean, renewable wind power in the United States. CIP manages over $7 billion in clean energy investments including offshore wind, onshore wind, and offshore power transmission. The partnership of the two companies in Vineyard Wind brings extensive offshore wind expertise and substantial financial capacity to the State's initiative to reduce greenhouse gases while enhancing energy security and reliability.

VineyardWind.com • info@vineyardwind.com • @vineyardwind • 508-717-8964
700 Pleasant Street, Suite 510 • New Bedford, MA 02740